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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/761,743	01/18/2001	Yuji Saeki	520.39527X00	6167
24956	7590	08/01/2005	EXAMINER	
MATTINGLY, STANGER, MALUR & BRUNDIDGE, P.C.			CHANG, RICHARD	
1800 DIAGONAL ROAD			ART UNIT	
SUITE 370			PAPER NUMBER	
ALEXANDRIA, VA 22314			2663	

DATE MAILED: 08/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/761,743

Applicant(s)

SAEKI ET AL.

Examiner

Richard Chang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 March 2005.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6, 8 and 9 is/are rejected.
- 7) ☒ Claim(s) 5 and 7 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 06/03/2005.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. Applicant's arguments with respect to claims 1-9 have been fully considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-3, 6 and 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over US patent No. 5,517,619 ("Muramatsu et al") in view of U.S. Patent No. 5,953,143 (Sharony) and U.S. Patent No. 5,323,386 ("Wiher et al").

Regarding claims 2 and 6, Muramatsu et al. teach a three dimensional network interconnection scheme of processor elements of a parallel computer (A multidimensional crossbar network in which ... a plurality of crossbar switches) comprising of the first dimensional coordinate transforming crossbar switch 9-1 (in X-axis), the second dimensional coordinate transforming crossbar switch 9-2 (in Y-axis) and the third dimensional coordinate transforming crossbar switch 9-3 (in Z-axis) wherein a relaying crossbar switch 14-1 for relaying operation of transferring a communication packet from one input-output port/buffer to the next buffer/input-output is

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provide to perform the packet communication between all the three dimensional coordinate transforming crossbar switches within all three dimensional axes at every independent coordinate point (wherein a switching device connected to first and second ... third crossbar switches; (Fig. 8, Col 11, line 16 to Col. 13, line 4).

Muramatsu et al. teach substantially all the claimed invention but did not disclose expressly the particular application involving limitations of

“interface conversion for performing packet communication by a light signal with any of the crossbar switches is performed ”.

Sharony teaches a multidimensional switching networks which use optical links between switching stages where packet data are converted from electrical signal to optical signal for transmission between switching stages (See Fig. 3, Col. 5, lines 41-66).

A person of ordinary skill in the art would have been motivated to employ Sharony in Muramatsu et al. in order to obtain a a three dimensional network interconnection and to take advantage of optical links between switching stages where packet data are converted from electrical signal to optical signal for transmission between switching stages in claims 2 and 6.

The suggestion/motivation to do so would have been to use optical links between switching stages where packet data are converted from electrical signal to optical signal for transmission between switching stages, as suggested by Huang in Col. 5, lines 41-66. At the time the invention was made, therefore, it would have been obvious to one of

ordinary skill in the art to which the invention pertains to combine Sharony with Muramatsu et al. to obtain the inventions specified in claims 2 and 6.

Regarding claim 1, 3, and 8-9, as discussed above, Muramatsu et al. and Sharony disclose substantially all the claimed invention but did not disclose expressly the particular application involving an interface for performing packet communication by a light signal with any of the crossbar switches is performed.

Wiher et al teach an expandable multistaged high speed serial data switch networks wherein all external high-speed interconnects can be made over fiber optic cables 220 that go to the input and output switches 204', 208' collocated with the remote interfaces 222 by keeping all the electrical signals within the local ports (interface conversion for performing packet communication by a light signal with any of the crossbar switches is performed) (Fig. 9, Col 5, line 52 to Col. 6, line 56).

A person of ordinary skill in the art would have been motivated to employ Wiher et al in Muramatsu et al. and Sharony in order to obtain a multidimensional crossbar network and parallel computer system and to take advantage of interconnecting all the external high-speed over fiber optic cables by keeping all the electrical signals within the local ports in claims 1, 3 and 8-9.

The suggestion/motivation to do so would have been to accommodate a multidimensional crossbar network and parallel computer system and to take advantage of interconnecting all the external high-speed over fiber optic cables by keeping all the electrical signals within the local ports. At the time the invention was made, therefore, it would have been obvious to one of ordinary skill in the art to which the invention

pertains to combine Wiher et al with Muramatsu et al. and Sharony to obtain the inventions specified in claims 1, 3 and 8-9.

Allowable Subject Matter

4. Claims 5 and 7 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims and if no art rejection can be applied.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard Chang whose telephone number is (571) 272-3129. The examiner can normally be reached on Monday - Friday from 8 AM to 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on (571) 272-3139. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

RKC
rkc

Richard Chang
Patent Examiner
Art Unit 2663

Ricky Ngo
RICKY NGO
PRIMARY EXAMINER

6/27/05